Remarks

By the foregoing amendment claims 1, 7, and 13 are amended. Applicants respectfully submit that no new matter was added by the amendment, as all of the claimed subject matter was either previously illustrated or described in the drawings, written specification and/or claims of the application. Entry of the amendment and favorable consideration thereof is earnestly requested.

Summary of the Prior Art and Disclosed Invention

The present invention relates to a medical instrument with a hollow shaft 2 on whose proximal end a handle 3 is mounted, which consists at least of a stationary gripping member 3a and gripping member 3b that is rotatable in relation to the stationary gripping member 3a. (10/626,414: Par. 22.) At the distal end of the shaft 2, a tool 4 is mounted, which has a rotatable jaw member 4a and a jaw member 4b that that is directly mounted to the shaft 2. (Id.) The jaw member 4 and the gripping member 3 of the handle are connected with one another by means of a push pin 5, mounted in the hollow shaft. (Id. at Par. 23.) The push pin 5 is secured at least partly in form-locking connection, into a rigid casing 12, which in turn can be inserted, as least in some sections form-locking connection, into the hollow shaft and the push pin can be installed in the casing, with at least section of it being rotation resistant. (Id. at Par. 8.)

This configuration in the present invention of the push pin, rigid casing, and hollow shaft serves several functions. First, with the simple construction of the medical instrument, the push pin is installed so that at least parts of it are rotation resistant in order to ensure the best possible power transmission, along with a good sensation for the operator. (Par. 7.) Second, as a result of this configuration and the fact that the shaft is displaced entirely in the axial direction, the push pin and the casing enter the shaft with out free play. (Par. 11.) Third, by installing a casing inside the hollow shaft it is possible by means of a simple construction to install the push pin so that it resists rotation inside the shaft. (Par. 9.) This construction requires no modification to a preexisting shaft.

(Id.) Fourth, this design makes it possible to later retrofit a hollow shaft of greater diameter in such a way as to ensure that the push pin resists rotation. (Par. 10.) Finally, this configuration allows the push pin and the casing to be simultaneously removed from the hollow shaft to allow better cleansing and to facilitate installation and repair. (Par. 14.)

Falk, the reference relied upon by the Examiner, discloses arthroscopy hook-clippers comprising a tube 3 with a circular cross section with a tool member 4 at the distal end, wherein a push pin 9 (thrust rod) extends through tube 3 for displacing the tool member 4. A hollow vacuum tube 7 also extends through the tube 3 beside or adjacent to the push pin 9. The push pin further has a gripper member at is proximal end. The tube 3 has at its proximal end, a male coupling element 5 for exchangeable connection to a fixed arm 1a of a handle 1. (Falk: Col. 2, lns. 9–15.)

Rejected Claims

The examiner has rejected claims 1 through 18 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,994,024 to Falk ("Falk"). The examiner has rejected claims 5, 11, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Falk in view of U.S. Patent No. 5,201,752 to Brown et al. ("Brown"). The Applicants respectfully submit that Falk does not anticipate the claimed invention, and that the claimed invention is not obvious in view of Falk or Brown, alone or in combination.

Summary of the March 25, 2008 Telephone Meeting with Examiner

On March 25, 2008 Applicants (through their undersigned counsel) participated in a telephone interview with the Examiner regarding the patentability of all pending claims, and specifically independent claims 1, 7, and 13. During that interview the Applicants and the Examiner discussed proposed amendments to the then pending claims to overcome the rejections in the current office action.

In response to that interview, the Applicants have amended the independent claims to incorporate the proposed claim amendments discussed during the interview.

First, the Applicants have amended claim 1 and claim 13 to include the limitation that at least one of the jaw members is directly mounted to the distal end of the hollow shaft. Second, the Applicants amended claim 7 and 13 to include the limitation that the rigid casing comprises a rod, and the recess of the rigid casing comprises an axial channel in the rod, the channel having a rectilinear cross-section defined entirely by the rod.

For the reasons stated below and those discussed during March 25, 2008 telephone interview, the Applicants respectfully submit that all pending claims are allowable over the references of record, and earnestly solicit allowance of the same.

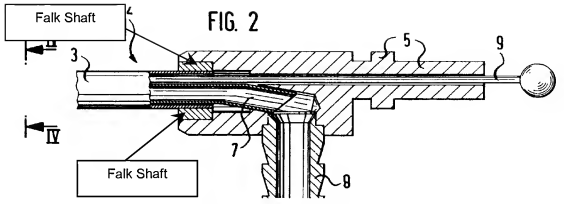
Argument

Novelty

Claims 1 through 6

The examiner has rejected claims 1 through 6 as being anticipated by Falk. The Applicants respectfully submit that Falk does not anticipate the claimed invention because Falk is missing the limitation that at least one of the jaw members is directly mounted to the distal end of the hollow shaft as required by claims 1 through 6.

The Examiner has indicated that Falk discloses a shaft, wherein the shaft is sandwiched between tube 3 and element 5. (The Falk shaft is labeled by the Applicants in the reproduction of Fig. 2, shown below, however it is not labeled in the Falk disclosure.)



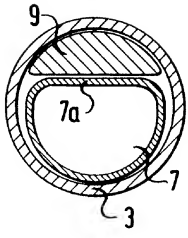
Falk does not disclose any jaw members directly mounted to the distal end of the hollow shaft. Rather, the jaw members disclosed in Falk are directly mounted to distal to the distal end of the casing 3, 7 (tubes 3 and 7). Thus Falk does not anticipate the present invention of claims 1 through 6.

Claims 7 through 12

The examiner has rejected claims 7 through 12 as being anticipated by Falk. The Applicants respectfully submit that Falk does not anticipate the claimed invention because Falk is missing the limitation that the rigid casing comprises a rod, and the recess comprises an axial channel in the rod having a rectilinear cross-section defined entirely by the rod as required by claims 7 through 12.

The examiner has asserted that Figs. 1-4 of Falk disclose a rectilinear push pin 9 inserted in to a recess of a rigid rectilinear casing defined by tubes 3 and 7 (Fig. 4.) Fig. 4 is shown below.

FIG. 4



Falk is missing the limitation that the casing is formed from a rod. Rather, the casing in Falk, as indicated by the examiner, is formed by two hollow tubes 3 and 7. Falk is further missing the limitation that the recess is a channel in the rod. Rather, the recess in Falk is a pocket defined by the inner wall of tube 3, and the upper flat surface 7A of vacuumtube 7. Finally, Falk is missing the limitation that the rectilinear cross-section of the channel is formed entirely by the rod as required by claims 7 through 12. Rather, the rectilinear cross-section in Falk is formed by tube 7 and tube 3. Furthermore, tube 3 does not define any rectilinear area of the cross-section as it defines only a circular cross section.

To the extent that shaft 7 can be considered a rod, it is missing the limitation that the push pin is inserted, at least partly in form-locking connection, into a recess of the rigid casing. Rather, the pushpin in Falk is outside of and adjacent shaft 7.

The casing and recess configuration claimed in the present invention is important because, as discussed above, the configuration makes it is possible by means of a simple construction to install the push pin so that it resists rotation inside the shaft, without modifying the shaft. Furthermore, this design makes it possible to later retrofit a hollow shaft of greater diameter in such a way as to ensure that the push pin resists rotation.

(Par. 10.) Finally, this configuration allows the push pin and the casing to be simultaneously removed from the hollow shaft to allow better cleansing and to facilitate installation and repair. (Par. 14.)

Claims 13 through 18

The examiner has rejected claims 13 through 18 as being anticipated by Falk. The Applicants have amended claims 13 through 18 to include the limitation added to claim 1 and the limitation added to claim 8. Therefore, for the reasons stated above, the Applicants respectfully submit that Falk does not anticipate the claimed invention in claims 13 through 18 because Falk is missing the two limitations discussed above, i.e. mounting of the jaw, and formation of the recess.

Nonobviousness

Not Obvious to Modify the Falk Shaft

There is no motivation to modify the Falk shaft by directly mounting one of the jaw members to the distal end of the shaft to arrive at the claimed invention as required by claim 1 through 6, and 13 through 18. The Falk shaft merely serves as a connecting piece, or washer, in which to receive the proximal end of the casing. (Fig. 2). Or applying a broader interpretation the Falk shaft includes the handle of the instrument. However, the Falk shaft does not extend distally to the working part of the tool. Rather, the casing extends in the distal direction, and one or more of the Falk jaw members are directly mounted to the distal end of the casing, not the hollow shaft.

There is no motivation to directly mount one of the jaw members to the distal end of the hollow shaft as this would result in an inoperable tool because the jaw member would be directly mounted at two separate points: one to the casing and two to the shaft. In such a configuration, the operator could not actuate the jaw members. Furthermore, Falk already discloses that the jaw members are directly mounted to the distal end of the casing.

Furthermore, Falk teaches against reducing the axial length of the casing so that the distal end of the Falk shaft and the jaw members are in close proximity. Falk teaches that casing must distally extend away from the working part of the tool, so it can be inserted into the body to perform a surgery, while at the same time the handle part of the tool, where the entirety of the hollow shaft is located, must remain outside the body so the surgeon can actuate the handle.

Moreover there is no teaching, suggestion, or motivation to extend the Falk shaft to the distal end of the casing where the jaw members are mounted. In fact, it is well know that a thinner shaft is preferred as there is less potential to negatively affect tissue during use. One having ordinary skill in the art would not be motivated to extend the Falk shaft to the gripping members, thereby increasing the overall diameter of the shaft, because this would increase the risk to the patient.

Not Obvious to Modify the Falk Casing

There is no motivation to modify the Falk casing to arrive at the claimed invention because Falk already teaches that the combination of the hollow casing 3 and the vacuum tube 7 provide a means for reducing axial rotation, i.e. torsion of the push pin, albeint in a different and more complex configuration then the present invention. A person having ordinary skill in the art would not be motivated to modify the configuration of Falk such that the rigid casing comprised a rod, and the recess comprised an axial channel in the rod having a rectilinear cross-section defined entirely by the rod as required by claims 7 through 18. Such a configuration would make the tool bulkier, and more expensive.

Falk necessarily requires a vacuum tube to remove debris from the surgical site. Thus, Falk uses the vacuum tube in combination with the shaft to resist rotation of the push pin. While this makes the design more complex it is not problematic because Falk requires the vacuum tube. Furthermore, there is no motivation to remove the vacuum tube, because Falk teaches that it essential for extraction or flushing of the surgical site. Finally, a person of ordinary skill in the art would not be motivated to insert the push pin

into the vacuum tube because such a modification would impede the extraction or movement of fluid through the vacuum tube.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1–18, are patentable over the references of record, and earnestly solicits allowance of the same

Respectfully submitted,

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